How to make a pinhole camera

Assembly (putting it together)

Remove the top of an aluminium beer can with a can opener

Make a new lid. Using thin black card cut out a circle 6cm in diameter and a strip 25cm x 7cm with notches cut along one edge

Cover with black gaffer tape to assemble a light proof cap on the end of a can

Push in a pin half way up the can and make a hole about 2mm in diameter

Cover the hole with a gaffer tape 'shutter'

Putting the 'film' in

Under a red (cycle) light, insert a sheet of photographic paper, curled inside of the can emulsion inwards

Make sure the paper doesn't cover the hole then replace the cap. Cover the lid with gaffer tape (to keep out the rain etc)

Taking your photo

Find a position pointing south towards the Sun.
Fix the camera sturdily in position with the cable ties.
Peel off the shutter (sticker)
Leave for three to six months

Developing the image

In a dark room, take the photo paper out of the can camera and place on to the scanner and press scan.
The image will come out as a negative which will need to be inverted with photo manipulation software

Home-made cameras track the Sun for

Sun spots caught in slow light

By **Fred Attewill**

SOME things in life are worth waiting for. Just ask photographer Justin Quinnell.

He was able to get these stunning images of the Sun's passage across the sky using pinhole cameras he made himself.

But he had to leave the cameras in exposed positions across his home town of Bristol for six months before he could see the results.

The trails of light show the passage of the Sun as it arcs across the sky over two seasons.

The lowest trail shows the Sun on the winter solstice in December while the highest tracks its path during the longest day in June.

Sometimes clouds obscured the Sun, meaning some of the traces became dotted. Mr Quinnell said he took to pinhole photography because it allowed him to indulge in his love of astronomy. 'Most of the cameras survived six months of wind, rain, hail – and being thrown in the bin,' he said.

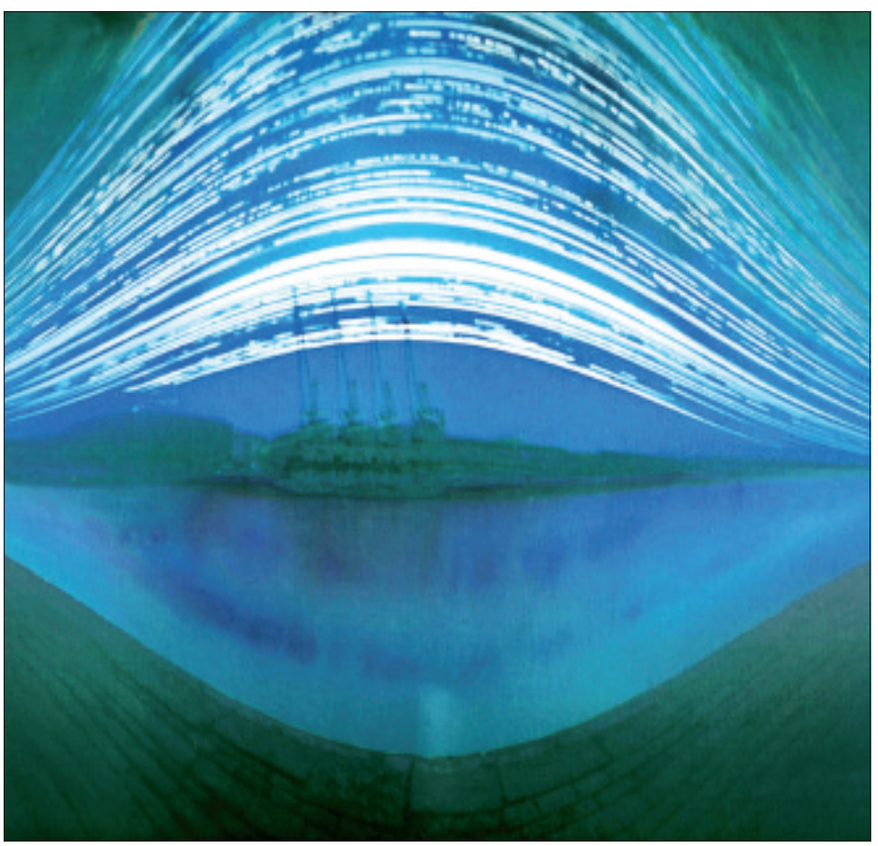
Pole position: A pinhole camera

'Several were blank, one was full of water and one, still exposing, currently sits inaccessibly under ten feet of bramble.'

'To be able to see six months' duration is incredible. It really puts us in our place,' he added.

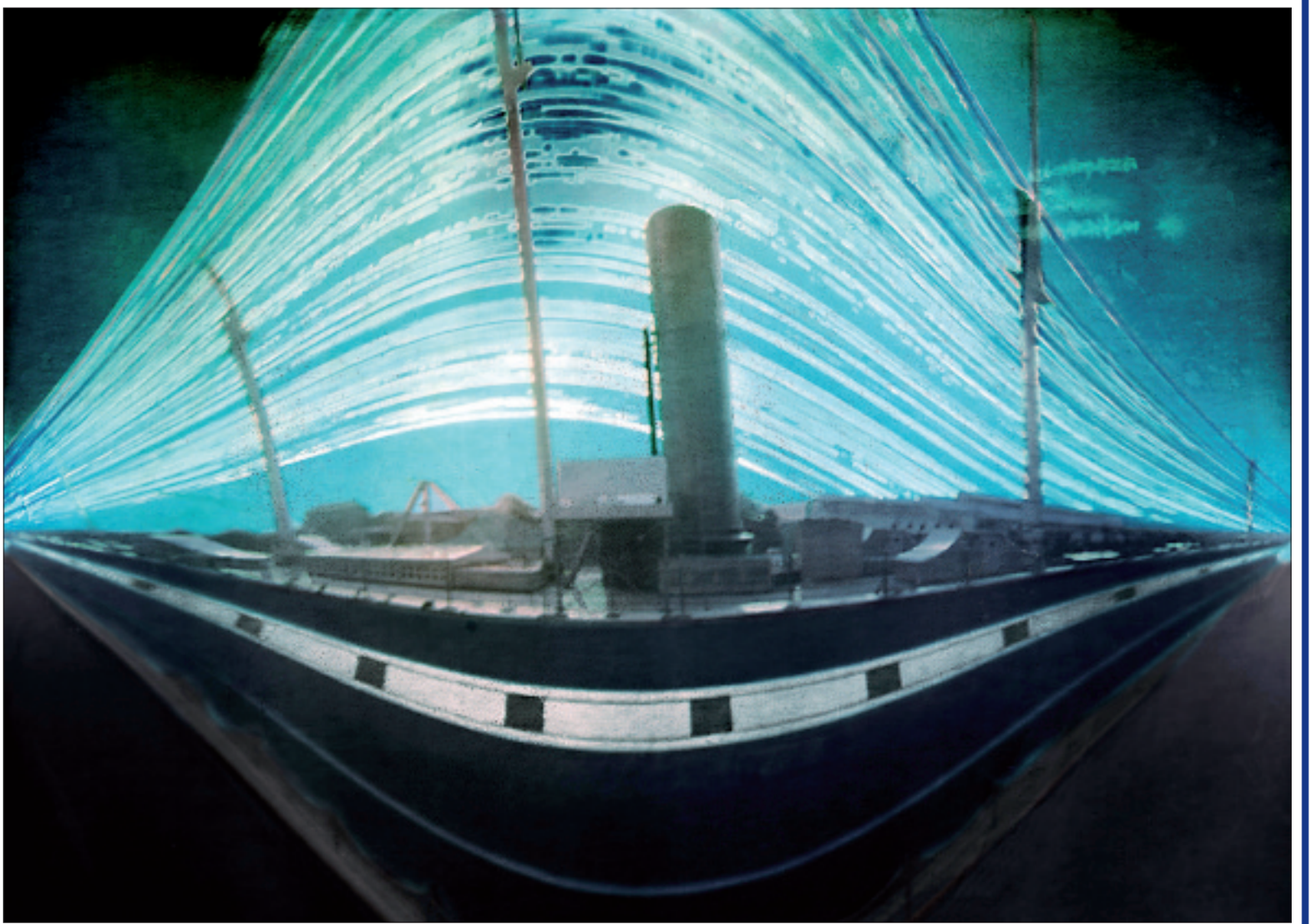
Mr Quinnell's photos also include a series taken from inside his mouth. Shots include his son Louis peering at him and photos of himself brushing his teeth and biting his nails – all framed with a photo of his teeth.

For more images visit www.pinholephotography.org



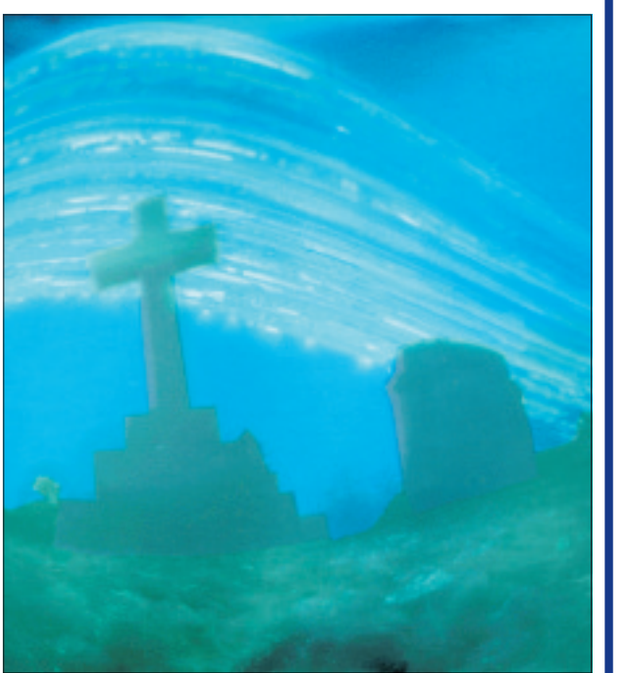
Water landscape: An image of cranes taken from The Arnolfini arts centre in Bristol

six months as it crosses the sky during the winter and summer solstices



Caught on film: The pinhole camera tracks the position of the Sun over SS Great Britain at Bristol dock Pictures: Justin Quinnell

Streets ahead: A view from Clifton Suspension Bridge



A photo entitled 3 Months In The Deaths Of Blance, Grace and Dorcus